

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A matrix converter ~~having a plurality of bi-directional switch means arranged in a configuration, the converter~~ comprising current commutation circuitry with a plurality of bi-directional switches arranged in a configuration means to effect operation of the plurality of bi-directional switches ~~switch means~~ to begin initiation of one switch ~~means~~ before de-activation of another switch ~~means~~ wherein the current commutation circuitry provides a commutation interval which approaches or equals zero.

2. (Currently Amended) A converter according to Claim 1 comprising a first switch ~~means~~ and a second switch ~~means~~ whereby, in a first mode in use, the first switch ~~means~~ is activated and the second switch ~~means~~ is not activated, and the current commutation circuitry ~~means~~ is operable to activate the second switch ~~means~~ before the first switch ~~means~~ is de-activated.

3. (Currently Amended) A converter according to ~~any preceding~~ claim 1 wherein the current commutation circuitry ~~operating means~~ comprises circuitry ~~means~~ to minimize ~~minimise~~ the commutation interval.

4. (Currently Amended) A converter according to ~~any preceding~~ claim 1 wherein the current commutation circuitry ~~operating means~~ comprises circuitry ~~means~~ to provide a commutation interval of less than those typically used as a ~~the~~ deadtime in a Voltage Source Inverter.

5. (Canceled)

6. (Currently Amended) A converter according to ~~any preceding~~ claim 1 wherein the current commutation interval ~~operating means~~ comprises circuitry ~~means~~ to provide a commutation interval which is ~~slightly~~ negative.

7. (Canceled)

8. (Currently Amended) A converter according to ~~any preceding~~ claim 1 wherein the converter comprises ~~[[a]]~~ the plurality of bi-directional switches ~~and timers thereby configured~~ to effect reduction of the commutation interval.

9. (Canceled)

10. (Currently Amended) A method of operating a converter having a plurality of bi-directional switches ~~switch means~~ arranged in a configuration, the method comprising effecting current commutation to operate the plurality of bi-directional switches ~~switching means~~ to begin activation of one switch ~~means~~ before de-activation of another switch ~~means~~ wherein a commutation interval approaches or equals zero.

11. (Currently Amended) A method according to Claim 10 comprising effecting ~~operating~~ the current commutation ~~means~~ in order to activate a second switch ~~means~~ before a first switch ~~means~~ is de-activated.

12. (Currently Amended) A method according to Claim 10 ~~or 11~~ comprising minimizing ~~minimising~~ the commutation interval.

13. (Currently Amended) A method according to ~~any of Claims~~ claim 10 ~~to 17~~ comprising providing a commutation interval of less than those typically used as a ~~the~~ deadtime in a Voltage Source Inverter.

14. (Canceled)

15. (Currently Amended) A method according to ~~any of Claims~~ claim 10 to 14 comprising providing a commutation interval which is ~~slightly~~ negative.

16. (Canceled)

17. (Currently Amended) A method according to claim 10 comprising operating the [[a]] plurality of bi-directional switches ~~and timers~~ thereby to effect reduction of the commutation interval.

18. (Canceled)

19. (Currently Amended) A computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for performing the method of claim ~~steps of any one of Claims 10 to 18~~ when said product is run on a computer.

20. (Currently Amended) A computer program directly loadable into the internal memory of a digital computer, comprising software code portions for performing the method of claim ~~steps of any one of Claims 10 to 18~~ when said program is run on a computer.

21. (Currently Amended) A carrier, which may comprise electronic signals, for a computer program of Claim 19 ~~20~~.

22. (Original) Electronic distribution of a computer program product of Claim 19 or a computer program of Claim 20 or a carrier of Claim 21.